National Aeronautics and Space Administration
Goddard Space Flight Center

Inside Wallops

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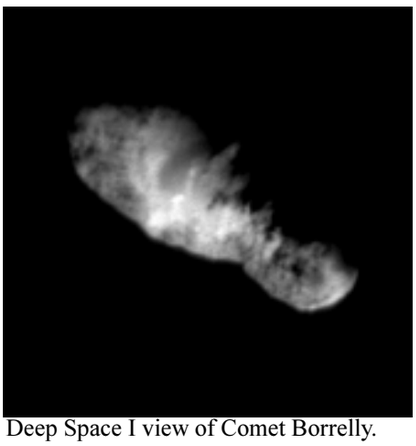
Aging NASA Spacecraft Captures Best-Ever View of Comet's Core

In a risky flyby, NASA's ailing Deep Space 1 spacecraft successfully navigated past a comet, giving researchers the best look ever inside the glowing core of icy dust and gas.

The space probe's close encounter with comet Borrelly provided the best-resolution pictures of the comet to date. The already-successful Deep Space 1, without protection from the little-known comet environment, whizzed by just 2,200 kilometers (1,400 miles) from the rocky, icy nucleus of the 10-kilometer-long (more than 6-mile-long) comet.



Deep Space I view of Comet Borrelly.

Exceeding the team's expectations of how this elderly spacecraft would perform, it sent back black-and-white photos of the inner core of the comet. It also measured the types of gases and infrared waves around the comet, and how the gases interacted with the solar wind.

"Deep Space 1 plunged into the heart of comet Borrelly and has lived to tell every detail of its spine-tingling adventure!" said Dr. Marc Rayman, the project manager of Deep Space 1 at the Jet Propulsion Laboratory (JPL), Pasadena, Calif. "The images are even better than the impressive images of comet Halley taken by Europe's Giotto spacecraft in 1986."

Rayman added, "After years of nursing this aged and wounded bird along — a spacecraft not structured to explore comets, a probe that exceeded its objectives more than two years ago — to see it perform its remarkably complex and risky assignment so well was nothing short of incredible."

"It's mind-boggling and stupendous," said Dr. Laurence Soderblom, the leader of Deep Space 1's imaging team, and a geologist with the U.S. Geological Survey, Flagstaff, Ariz. "These pictures have told us that comet nuclei are far more complex than we ever imagined. They have rugged terrain, smooth rolling plains, deep fractures and very, very dark material."

Scientists also realized that Borrelly was different than they expected as Deep Space 1 flew through the coma, the cloud of dust and gas surrounding the nucleus. They had expected that the solar wind would flow symmetrically around the cloud, with the nucleus in the center.

Instead, they found that though the solar wind was flowing symmetrically around the cloud, the nucleus was off to one side shooting out a great jet of material forming the cloud that makes the comet visible from Earth. "The formation of the coma is not the simple process we once thought it was," said Dr. David Young of the University of Michigan, Ann Arbor, leader of the team that made the measurements. "Most of the charged particles are formed to one side, which is not what we expected."

Deep Space 1 completed its primary mission testing ion propulsion and 11 other advanced, high-risk technologies in September 1999. NASA extended the mission, taking advantage of the ion propulsion and other systems to undertake this chancy but exciting encounter with the comet.

More information can be found on the Deep Space 1 Internet home page at: http://nmp.jpl.nasa.gov/ds1/

Kodiak Star Successfully Launched from Alaska

A Lockheed Martin Athena 1 rocket carrying the Kodiak Star was successfully launched from Kodiak Island, Alaska, at 10:40 p.m.EDT on September 29.

The Kodiak Star payload consisting of four small satellites for NASA and the U.S. Air Force was successfully deployed making this the first orbital launch from Alaska.

NASA Wallops Flight Facility equipment and more than 30 personnel have been located on Kodiak Island and the town of Cordova on the Alaskan mainland just north of Kodiak Island providing range safety, radar tracking and telemetry support for the mission.

Wallops shorts……..

Balloon Launch

A NASA scientific balloon was aunched on September 24 from Ft. Sumner, N.M. The 39.57 million cubic foot balloon carried an experiment to observe galactic cosmic ray sources at high altitude. The principal investigator was Dr. Akira Yamamoto, University of Tokyo. Total flight time was 17 hours, 47 minutes.

Sounding Rocket Launch

A Terrier-Lynx sounding rocket was successfully launched from Kauai, Hawaii on September 27. The purpose of this NASA reimbursable launch was to provide a system loading/fleet warm-up round for the U.S. Navy in preparation for a high fidelity target round scheduled for a later launch. The principal investigator was John Winstead, Naval Air Warfare Center Weapons Division, White Sands Missile Range, N.M.

Director's all Hands Meeting

Goddard employees are invited to attend the Director's all Hands meeting, Oct. 2, in Building 8 Auditorium at 9 a.m. This meeting continues the new series for all employees, which focuses on accomplishments, current work, challenges, and future opportunities. The October session features the Earth Sciences Directorate.

Wallops employees may view the presentations on Channel 6 and call in questions to x66-9036.

Helping Kids Deal with Tragedy

In the aftermath of the tragic events that unfolded in our nation September 11, parents are striving to express a range of emotions, including loss, grief, disbelief, horror and fear. At the same time, they must help their children understand the day's events and cope with their feelings.

Parents can visit the National Parent Teacher Association (PTA) website, www.pta.org, for information in helping children deal with tragedy.

Topics include:
1) When Disaster Strikes
2) Children and Grief
3) Talk to Your Child About Hatred and Prejudice
4) Culture and Ethnicity
5) Violence, Kids, Crisis.

Other sites offering information for parents and kids are:
www.connectforkids.org
www.fema.gov/kids

Public Seminar Series Fall 2001

October 3 - SC Community-Based Oyster Restoration Program: Things are different in the South. Dr. Loren Coen, Senior Research Scientist, Marine Research Institute, South Carolina Department of Natural Resources

November 7 - Life History and Conservation of the Blue Crab in the Chesapeake Bay. Dr. Romuald Lipcius, Professor of Marine Science, Virginia Institute of Marine Science, College of William and Mary

December 5 - Ecological Value of Shellfish in the Chesapeake Bay. Dr. Roger Newell, Professor, Horn Point Environmental Laboratories, University of Maryland

Sponsored by the Virginia Institute of Marine Science (VIMS), in collaboration with the Citizens for a Better Eastern Shore, these free seminars focus on the ecology and natural resources of the Shore and related environments.

The seminars begin at 7:30 p.m. in the Eastern Shore Laboratory of VIMS in Wachapreague, Va., and are open to everyone. Seating is available on a first-come-first serve basis.

For further information or directions call, (757) 787-5816.

Official Travel Bulletin

In light of the tragic events recently, Headquarters has issued new travel direction stating that travel for Goddard employees and contractors be limited to what is absolutely necessary. Until further notice, the following procedures will apply:

- travel for safety-related or mission-critical purposes only, will require approval following current procedures.

- all foreign travel will require approval by the Center Director.

- all travel to launches will require Center Director approval.

- all travel to conferences, symposia, or similar gatherings will require approval by the Center Director.

- travel via automobile in excess of 300 miles (one way) will require approval by the Center Director.

In all cases, the travel authorization must contain a clear explanation (Block 11 on NASA Form 372) as to why it is critical that the individual travel.

The Office of Procurement will be providing similar guidance concerning travel to our contractors.

The Next Generation of Learning

The Office of Human Resources (OHR), Human Resources Development Office, is proud to unveil GSFC's newest Technology-Based Learning Programs: Web and Satellite-Based Training.

Web-Based Training enables individuals to access vast repositories of training, from their computers, such as information technology, business, interpersonal skills and desktop applications. Web-Based Training can also be used as a resource to quickly search and locate specific information needed for an immediate task-at-hand. This training can be accessed at any time and from any location where Internet access is available.

OHR has contracted with a vendor to provide over 1,600 courses to the GSFC civil servant community, at no cost to the individual or their organization. Registration and approval will be on-line, and a URL, login and password will be provided for up to one year to take advantage of these training opportunities.

Satellite-Based Training hosts live and interactive technical, management and business seminars by television that are relevant and useful on the job. It provides direct delivery to the worksite reducing lost time and personal inconvenience.

Approximately 400 courses are presented annually by leading experts from universities, professional societies, consulting organizations and training companies providing a broad range of topics with a rich mix of applications courses, theory and overviews. Many of the courses are offered live and interactively. Others will be taped, maximizing individual and organizational flexibility.

Come over for the Open House featuring the newest Technology-Based Learning Programs and demonstrations.

October 4
E-2 Conference Room
Satellite-Based Training - 11 a.m.
Web-Based Training - Noon

For more information contact Sherry Tharpe, x66-6533 or by E-mail: sltharpe@pop100.gsfc.nasa.gov, or Pamela Barrett on x66-7285 or by E-mail: pbarrett@pop100.gsfc.nasa.gov.

Student Intern

Digital photo by R. Dufrene

Chincoteague High School senior, Kenneth Fair, above, is taking part in Accomack County Schools' Internship Program. He is spending 140 hours of the fall semester with Russ Dufrene, GN&C Systems Engineering Branch.

Use or Lose Leave for Civil Service Employees

With the end of the leave year 2001 approaching, civil service employees are urged to pay attention to their "Leave and and Earnings" statements to check their use or lose leave status.

If you fall into the category of having accumulated this type of leave, you must use it by the pay period which ends on Jan. 12, 2002 or lose whatever amount of leave that exceeds the 240 hour threshold.

Wallops Mentoring Program

The Office of Human Resources (OHR) is accepting applications for a Wallops component of the Center's Mentoring Program through October 5.

Information has been posted on the web at: http://ohr.gsfc.nasa.gov/, select "Hot Topics" link at the bottom of the page.

Columbus Day is observed October 8

The next Inside Wallops will be October 15.

Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Wallops Office of Public Affairs, Extension 1584, in the interest of Wallops employees.

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http://www.wff.nasa.gov